Daily Diary Report by Bid Item

Contract No.: **04-0120F4**
Diary #: **506** **Const Calendar Day:** 891 **Date:** **16-Feb-2012** **Thursday**
Inspector Name: **Bruce, Matt** **Title:** **Transportation Engineer**
Inspection Type: Intermittent
Shift Hours: 05:00 am 03:30 pm **Break:** 00:30 **Over Time:** 02:00
Federal ID:
Location:
Reviewer: **Schmitt, Alex** **Approved Date:** **Status:** Submit

04-0120F4
04-SF-80-13.2/13.9
Self-Anchored
Suspension Bridge

Weather

Temperature **7 AM** 40 - 50 **12 PM** 50 - 60 **4PM** 50 - 60
Precipitation 0.00" **Condition** Partly Cloudy

Working Day ☐ If no, explain:

Diary: Dispute ☐

Work description.

- John Lyons, Phil Latasa, Sami Dauok and myself checked the out to out distance for the cable strands today as Sami's and my measurements are tabulated below. Sami and I were responsible for the mainspans only today. Similarly John and Phil were responsible for checking the sidespans and the west-loop. Sami assisted me with the measurements and tabulating the data as I took all of the measurements. I used the Maletic gauge (Yellow #1) to take the out to out measurements of the cable strands.

All measurement by both crews were reported to Alex who was stationed in the Caltrans Connex recording and analyzing the data. When all of the measurements were completed, Alex was responsible for reviewing the measurements with ABF engineer Zach Lauria. See Alex's diary for more details related to the acceptance or rejection of cable strand sag adjustment.

Ambient temperatures were taken with the red temperature gauge. Wind speeds were obtained from weather.com at the time of the measurements. The steel temperature measurements were taken with the digital thermometer placed on the outer cable strand wires.

The official sunrise time per weather.com for San Francisco today was at 6:59am. The following measurements were taken of the relative sag from cable strand number 1 at the given times below:

// North Mainspan //
Time = 5:08am
Ambient Temperature = 51F
Condition = Clear
Wind = N @ 6mph
ABF Surveyor(s) = Terry Denis and Mike Bonidici
Caltrans Engineer(s) = Matt Bruce and Sami Dauok

Cable Strand	Steel Temperature (F)	O-O (#1Y) CT / ABF (mm)	Theor (mm)	CT Delta (mm)
1	53	Baseline or Zero	75	0
35	52	452, 447 - Ave = 450 / 458	452	- 8
37	53	573, 573 - Ave = 573 / 566	566	+ 7
38	51	162, 166, 164 - Ave = 164 / 161	177	- 13
39	51	432 / 425	234	+

198

40	52	451 / 445	290	+
161				
41	52	481 / 476	347	+
134				
42	53	524 / N/A	404	+
120				
43	53	589 / N/A	461	+
128				

Comments: All cable strands were considered to be free-hanging at the time of measurement on the north mainspan. I took all of the measurements while Sami assisted me with setting up the targets, being level, normal to cable, etc. The measurements from ABF surveyors were done by Terry Denis.

// South Mainspan //
Time = 5:45am
Ambient Temperature = 52F
Condition = Clear
Wind = N @ 4mph
ABF Surveyor(s) = James Allen and Ken (last name not known at this time)
Caltrans Engineer(s) = Matt Bruce and Sami Dauok

Cable Strand	Steel Temperature (F)	O-O (#1Y) CT / ABF (mm)	Theor (mm)	CT Delta (mm)
1	53	Baseline or Zero	76	
0				
35	52	451, 451 - Ave = 451 / 447, 456	458	-
7				
37	52	571, 574 - Ave = 573 / 576, 580	576	-
3				
38	53	234 / 232, 230	173	+
61				
39	52	364 / 365, 364	231	
+133				
40	52	358 / 354, 357	290	+
68				
41	52	470 / 468, 472	349	+
121				
42	52	495 / N/A	407	
+ 88				
43	52	566 / N/A	466	
+ 100				

Comments: All cable strands were considered to be free-hanging at the time of measurement on the south mainspan. I took all of the measurements while Sami assisted me with setting up the targets, being level, normal to cable, etc. The first number from ABF surveyors was done by Terry Denis and the second one was done by James Allen.

- Sami and myself completed measurements at both the north and south mainspans at 6:05am. All numbers were reported to Alex Schmitt and we were ready for any remeasures that possibly could have been requested. I proceeded to calculate deltas from the theoretical values and compare my measurements with the ones obtained by ABF surveyors James Allen and Terry Denis at these locations.

- Approximately at or around 8:00am I proceeded to assist with checking cable strand number 38 at the north sidespan. See John Lyons, Alex Schmitt, and Phil Latasa's diaries for more details regarding nature and comments related to the issue with this particular cable strand. I merely came to this location to offer

my opinion and to take a check shot. I used a (-61 Block) to take my measurement on cable strand number 38 to clear cable strand number 29. The number recorded was 124mm (185 w/ block) and I attempted to invert the rod and measure w/out the block to no avail.

- Continued to develop a plan for surveying the suspender brackets on the OBG. I purchased small tools to assist with the layout task at Home Depot in Emeryville.

- Talked to ESC salesman/surveyor Mario Menesini about an order of a metric steel tape for the layout of the cable bands along the top of the cable. I mentioned that the steel tape had to be calibrated to 20C (68F) and be metric. I mentioned that a 50m (164') metric tape should be sufficient for the task.

- Developed a checksheet for the "Cable Strand Gauge Calibration". This sheet would be used as documentation to ensure that our equipment is accurate, especially after the incident/dispute this morning over the measurements for cable strand 38 at the north mainspan.

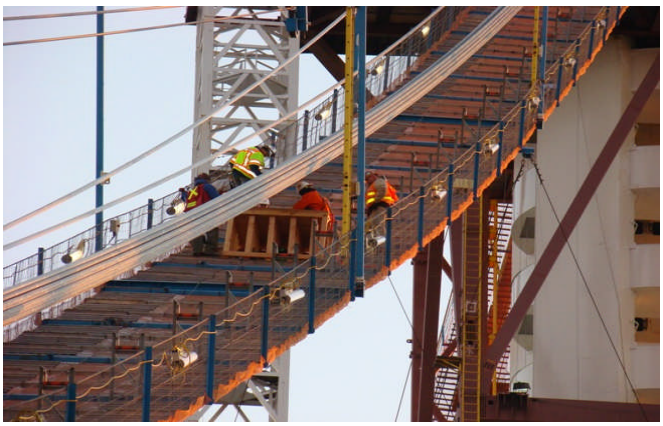
- Calibrated both Maletic cable strand sag adjustment gauges which are #1 Yellow and #2 Blue. There were no problems found while calibrating both gauges. See photos below for more details and comments.

- Worked on compiling my measurements and gave the daily cable strand sag adjustment sheets to Alex.

- Reviewed previous daily cable strand sag adjustment sheets for Michelle Chui regarding accuracy and clarification.

Attachment

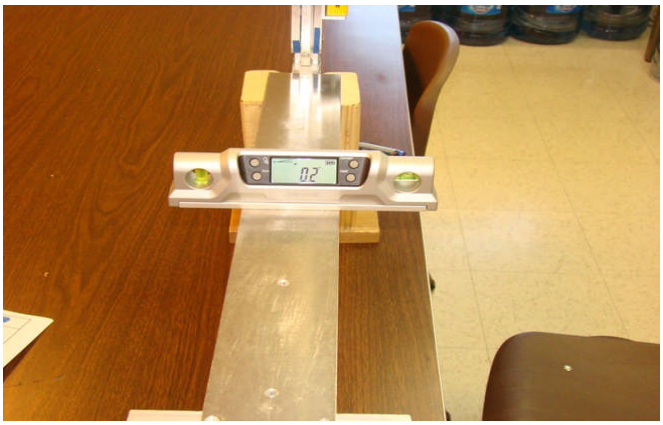
Checking the "vertical-arm" of the Maletic cable strand sag adjusting gauge (#1 Yellow) where the smart level was placed in the vertical direction.



ABF surveyors/engineer and Caltrans engineers checking measurements at the north sidespan on cable strand number 38.

Dimension of the block used to calibrated the Maletic gauge and targets.

Checking the "sliding laser" of the Maletic cable strand sag adjusting gauge (#2 Blue) at 100mm while level.



Checking the "flat-plate" of the Maletic cable strand sag adjusting gauge (#1 Yellow) where the smart level was placed in the transverse direction.

Checking the "sliding laser" of the Maletic cable strand sag adjusting gauge (#1 Yellow) at 500mm while level.